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ATTORNEY'S DOCKET NO: C01039.70075.US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant Serial No.

Krieg et al. unassigned

Conf. No. Filed uassigned Herewith

For

IMMUNOSTIMULATORY NUCLEIC ACIDS

Examiner

unknown

Art Unit : unknown

Mail Stop Patent Application

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF DISCLOSURE UNDER 37 C.F.R. §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, the Applicant requests consideration of this Information Disclosure Statement.

PART I: Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

PART II: Information Cited

The Applicant hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

PART III: Remarks

Documents cited on the attached form PTO-1449 (modified) are enclosed unless otherwise indicated on the attached form PTO-1449 (modified). It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application;

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, the Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Notwithstanding any statements by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

An early and favorable action is hereby requested.

Respectfully submitted, Arthur M. Krieg, et al., Applicant

By:

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Dated: July 3, 2003

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ORM PTO-1449/A and B (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
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Sheet 1 of 6	GROUP ART UNIT: unknown	EXAMINER: unknown

U.S. PATENT DOCUMENTS

Examiner's	Cite No.	Cite U.S. Patent Document		Name of Patentee or Applicant of Cited	Date of Publication or of issue	
Initials#		Number	Kind Code	Document	of Cited Document MM-DD-YYYY	
	*	3,906,092		Hilleman et al.	09-16-1975	
	*	5,023,243		Tullis	06-11-1991	
	*	5,248,670		Draper et al.	09-28-1993	
	*	5,585,479		Hoke et al.	12-17-1996	
	*	5,663,153		Hutcherson et al.	09-02-1997	
	*	5,723,335		Hutcherson et al.	03-03-1998	
	*	5,786,189		Locht et al.	07-28-1998	
	*	5,849,719		Carson et al.	12-15-1998	
	*	6,194,388	B1	Krieg et al.	02-27-2001	
	*	6,207,646	B1	Krieg et al.	03-27-2001	
	*	6,214,806	B1	Krieg et al.	04-10-2001	
_	*	6,218,371	B1	Krieg et al.	04-17-2001	
	*	6,239,116	B1	Krieg et al.	05-29-2001	
	*	6,339,068	B1	Davis et al.	01-15-2002	
		6,552,006	B2	Raz et al.	04-22-2003	

FOREIGN PATENT DOCUMENTS

Examiner's Initials#	Cite	Foreign Patent Document		ment	Name of Patentee or Applicant of Cited	Date of	Translation
		No.	Office/ Country	Number	Kind Code	Document (not necessary)	Publication of Cited Document MM-DD-YYYY
	*	EP	0468520	A3		01-29-1992	[
	*	EP	0302758	B1		11-08-1989	
	*	WO	91/12811			09-05-1991	
	*	WO	92/03456			04-05-1992	
	*	WO	92/18522			10-29-1992	
	*	WO	92/21353			12-10-1992	
	*	WO	94/19945			09-15-1994	
	*	WO	95/05853			03-02-1995	
	*	WO	95/26204			10-05-1995	
	*	WO	96/02555	Al		02-01-1996	
	*	WO	96/35782			11-14-1996	
	*	WO	97/28259			08-07-1997	
	*	WO	98/14210			04-09-1998	

OTHER ART - NON PATENT LITERATURE DOCUMENTS

Examiner's Initials#	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue number(s), publisher, city and/or country where published.	Translation (Y/N)
	*	ADYA N et al., Expansion of CREB's DNA recognition specificity by Tax results from interaction with Ala-Ala-Arg at positions 282-284 near the conserved DNA-binding domain of CREB. <i>Proc Natl Acad Sci</i> USA 91(12):5642-6, Jun. 7, 1994.	
	*	ANGIER N, Microbe DNA seen as alien by immune system, New York Times, Apr. 11, 1995.	
	*	AZAD RF et al., Antiviral activity of a phosphorothioate oligonucleotide complementary to RNA of the human cytomegalovirus major immediate-early region, <i>Antimicrobial Agents and Chemotherapy</i> , 37:1945-1954, Sep. 1993.	

FORM PTO-1449/A and B (Modified)	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
INFORMATION DISCLOSURE	FILING DATE: Herewith	
STATEMENT BY APPLICANT	APPLICANT: Krieg et al.	
Sheet 2 of 6	GROUP ART UNIT: unknown	EXAMINER: unknown

	AZZIDAA Disabasis landisamanda isabasis andisamanda an	···-
*	AZUMA, Biochemical and immunological studies on cellular components of tubercle bacilli, Kekkaku, 69(9):45-55 (1992).	
*	BALLAS ZK et al., Induction of NK activity in murine and human cells by CpG motifs in	
	oligodeoxynucleotides and bacterial DNA. J Immunol 157(5):1840-5 (1996).	
	BAYEVER E, systemic administration of a phosphorothioate oligonucleotide with a sequence	
*	complementary to p53 for acute myelogenous leukemia and myelodysplastic syndrome: initial	
	results of a Phase I trial, Antisense Res Dev, 3:383-390 (1993).	•
*	BENNETT RM et al., DNA binding to human leukocytes. Evidence for a receptor-mediated	
•	association, internalization, and degradation of DNA. J Clin Invest 76(6):2182-90 (1985).	
*	BIOLABS 1988-1989 Catalog, Random Primer #s 1230, 1601, 1602.	
	BLAXTER et al., Genes expressed in Brugia malayi infective third stage larvae, Mol Biochem	
*	Parasitol, 77:77-93 (Apr. 1996).	
	BOGGS RT et al., Characterization and modulation of immune stimulation by modified	
*	oligonucleotides. Antisense Nucleic Acid Drug Dev 7(5):461-71, Oct. 1997.	
	BRANDA et al., Immune stimulation by an antisense oligomer complementary to the rev gene of	
*	HIV-1, Biochem Pharmacol, 45(10):2037-2043 (1993).	
	BRANDA RF et al., Amplification of antibody production by phosphorothioate	
*	oligodeoxynucleotides. <i>J Lab Clin Med</i> 128(3):329-38, Sep. 1996.	
	BRISKIN M et al., Lipopolysaccharide-unresponsive mutant pre-B-cell lines blocked in NF-kappa	
*		
	B activation, Mol Cell Biol, 10:1:422-5 (1990).	
*	CHACE J et al., Regulation of differentiation in CD5+ and conventional B cells, Clin Immunol	
	Immunopathol, 68(3):327-332 (1993).	
	CHANG YN et al., The palindromic series I repeats in the simian cytomegalovirus major	
*	immediate-early promoter behave as both strong basal enhancers and cyclic AMP response	
	elements. J Virol 64(1):264-77, Jan. 1990.	
*	CHU RS et al., CpG oligodeoxynucleotides act as adjuvants that switch on T helper 1 (Th1)	
	immunity. J Exp Med 186(10):1623-31, Nov. 17, 1997.	
	COWDERY J et al., Bacterial DNA induces NK cells to produce IFN-gamma in vivo and increases	
	the toxicity of lipopolysaccharides, <i>J Immunol</i> , 156:12:4570-5 (1996).	
	CROSBY SD et al., The early responses gene NGFI-C encodes a zinc finger transcriptional	
*	activator and is a member of the GCGGGGGCG (GSG) element-binding protein family, Mol Cell	
	Biol, 2:3835-3841 (1991).	
*	CRYSTAL R, Transfer of genes to humans: early lessons and obstacles to success, Science,	
	270:404-410 (1995).	
*	ENGLISCH et al., Chemically modified oligonucleotides as probes and inhibitors, Angew Chem Int	
	Ed Engl, 30:613-629 (1991).	
*	ERB KJ et al., Infection of mice with Mycobacterium bovis-bacillus Calmette-Guerin (BCG)	
	suppresses allergen-induced airway eosinophilia. J Exp Med 187(4):561-9, Feb. 16, 1998.	
*	ETLINJER, Carrier sequence selectionone key to successful vaccines, Immunology Today,	
_	13(2):52-55 (1992).	
*	European Patent Office, International Search AuthoritySearch Report, PCTUS95/01570, Jul. 11,	- T
	1995.	
*	FOX RI, Mechanism of action of hydroxychloroquine as anantirheumatic drug, Chem Abstracts	
	120:15, Abstract No. 182630 (Apr. 29, 1994).	1
*	GURA T, Antisense has growing pains, Science, 270:575-576 (1995).	
*	HADDEN J et al., Immunopharmacology, <i>JAMA</i> , 268:20:2964-2969 (1992).	
*	HADDEN J et al., Immunostimulants, <i>TIPS</i> , 141:169-174 (1993).	
	HALPERN MD et al., Bacterial DNA induces murine interferon-gamma production by stimulation	- -
*	of interleukin-12 and tumor necrosis factor-alpha. Cell Immunol 167(1):72-8 (1996).	1
·	or micround-12 and tumor necrosis factor-alpha. Cen minutes 101(1).12-6 (1770).	

FORM PTO-1449/A and B (Modified)	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
INFORMATION DISCLOSURE	FILING DATE: Herewith	
STATEMENT BY APPLICANT	APPLICANT: Krieg et al.	
Sheet 3 of 6	GROUP ART UNIT: unknown	EXAMINER: unknown

	*	HATZFELD J, Release of early human hematopoietic progenitors from quiescence by antisense	
		transforming growth factor β1 or Rb oligonucleotides, J Exp Med, 174:925-929 (1991).	
	*	HIGHFIELD PE, Sepsis: the more, the murkier, Biotechnology, 12:828, Aug. 12, 1994.	
	1	HOEFFLER JP et al., Identification of multiple nuclear factors that interact with cyclic adenosine	
	*	3',5'-monophosphate response element-binding protein and activating transcription factor-2 by	
		protein-protein interactions. Mol Endocrinol 5(2):256-66, Feb. 1991.	
		IGUCHI-ARIGA SM et al., CpG methylation of the cAMP-responsive enhancer/promoter	
	*	sequence TGACGTCA abolishes specific factor binding as well as transcriptional activation. Genes	
		Dev 3(5):612-9, May 1989.	
	*	ISHIKAWA R et al., IFN induction and associated changes in splenic leukocyte distribution. J	
		Immunol 150(9):3713-27, May 1, 1993.	
		IVERSEN P et al., Pharmacokinetics of an antisense phosphorothioate oligodeoxynucleotide	
	*	against rev from human immunodeficiency virus type 1 in the adult male rat following single	
		injections and continuous infusion, Antisense Res Dev, 4:43-52 (1994).	
		JAKWAY J et al., Growth regulation of the B lymphoma cell line WEHI-231 by anti-	
	*	immunoglobulin, lipopolysaccharide, and other bacterial products, <i>J Immunol</i> , 137:7:2225-31	
		(1996).	
	*	JAROSZEWSKI J et al., Cellular uptake of antisense oligonucleotides, Adv Drug Delivery Rev,	
_(0)		6:3:235-50 (1991).	
	*	KATAOKA T et al., Antitumor activity of synthetic oligonucleotides with sequences from cDNA	
	1 "	encoding proteins of Mycobacterium bovis BCG, Jpn J Cancer Re., 83:244-247, Mar. 1992.	
	*	KIMURA Y et al., Binding of oligoguanylate to scavenger receptors is required for	
	- "	oligonucleotides to augment NK cell activity and induce IFN, J Biochem, 116(5):991-994 (1994).	
	*	KLINE JN et al., CpG motif oligonucleotides are effective in prevention of eosinophilic	
		inflammation in a murine model of asthma. J Invest Med 44(7):380A (1996).	
1	*	KLINE JN et al., CpG oligonucleotides can reverse as well as prevent TH2-mediated inflammation	
	"	in a murine model of asthma. J Invest Med 45(7):298A (1997).	
	*	KLINE JN et al., Immune redirection by CpG oligonucleotides. Conversion of a Th2 response to a	
		Th1 response in a murine model of asthma. J Invest Med 45(3):282A (1997).	
l e		KLINMAN DM et al., CpG motifs present in bacteria DNA rapidly induce lymphocytes to secrete	
8	*	interleukin 6, interleukin 12, and interferon gamma. Proc Natl Acad Sci USA 93(7):2879-83	
		(1996).	
	*	KRIEG AM et al, Phosphorothioate oligodeoxynucleotides: antisense or anti-protein?, Antisense	
		Res Dev, 5:241 (1995).	
	*	KRIEG AM et al, The role of CpG dinucleotides in DNA vaccines, Trends in Microbiology, 6:23-	
		27, Jan. 1998.	
	*	KRIEG AM et al., A role for endogenous retroviral sequences in the regulation of lymphocyte	
		activation, J Immunol 143(8):2448-51, Oct. 15, 1989.	
	*	KRIEG AM et al., CpG DNA: A pathogenic factor in systemic lupus erythematosus? J Clin	
	"_	Immunol, 15(6):284-292 (1995).	
	*	KRIEG AM et al., CpG motifs in bacterial DNA trigger direct B-cell activation. Nature 374:546-9,	
		6 Apr. 1995.	
	*	KRIEG AM et al., Leukocyte stimulation by oligodeoxynucleotides, Applied Antisense	
	*	Oligonucleotide Technology 431-448 (1998),.	
		KRIEG AM et al., Modification of antisense phosphodiester oligodeoxynucleotides by a 5'	
	*	cholesteryl moiety increases cellular association and improves efficacy, <i>Proc Natl Acad Sci USA</i> ,	
		90:1048-1052 (1993).	
		KRIEG AM et al., Oligodeoxynucleotide modifications determine the magnitude of B cell	
	*	stimulation by CpG motifs. Antisense Nucleic Acid Drug Dev 6(2):133-9, Summer 1996.	

FORM PTO-1449/A and B (Modified)	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
INFORMATION DISCLOSURE	FILING DATE: Herewith	
STATEMENT BY APPLICANT	APPLICANT: Krieg et al.	
Sheet 4 of 6	GROUP ART UNIT: unknown	EXAMINER: unknown

	*	KRIEG AM et al., Uptake of oligodeoxyribonucleotides by lymphoid cells is heterogeneous and	
	ļ	inducible. Antisense Res Dev 1(2):161-71, Summer 1991.	
	*	KURAMOTO et al., Oligonucleotide sequences required for natural killer cell activation, <i>Jpn J Cancer Res</i> , 83:1128-1131, Nov. 1992.	
	*	LEONARD GA et al., Conformation of guanine 8-oxoadenine base pairs in the crystal structure of	
		d(CGCGAATT(O8A)GCG), Biochemistry, 31(36):8415-8420 (1992).	
		LIPFORD G et al., CpG-containing synthetic oligonucleotides promote B and cytotoxic T cell	
	*	responses to protein antigen: a new class of vaccine adjuvants, Eur J Immunol, 27(9):2340-4	
		(1997).	
	*	LIPFORD G et al., Immunostimulatory DNA: sequence-dependent production of potentially	
	•	harmful or useful cytokines, Eur J Immunol, 12(27):3420-3426 (1997).	
		MACFARLANE DE et al., Antagonism of immunostimulatory CpG-oligodeoxynucleotides by	
	*	quinacrine, chloroquine, and structurally related compounds. J Immunol 160(3):1122-31, Feb. 1,	
		1998.	
		MASTRANGELO MJ et al., Gene therapy for human cancer: an essay for clinicians. Seminars	
	*	Oncology, 23(1):4-21 (1996).	
_		MATSON S et al., Nonspecific suppression of [3H]thymidine incorporation by control	
	*	oligonucleotides. Antisense Res Dev 2(4):325-30, Winter 1992.	
		MCINTYRE K et al., A sense phosphorothioate oligonucleotide directed to the initiation codon of	
	*	transcription factor NF-kappa B p65 causes sequence-specific immune stimulation, Antisense Res	
		Dev, 3(4):309-322 (1993).	
	*	MESSINA et al., Stimulation of in vitro murine lymphocyte proliferation by bacterial DNA, J	
	-	Immunol, 147(6):1759-1764, Sep. 15, 1991.	
	*	MESSINA, et al., The influence of DNA structure on the in vitro stimulation of murine	
		lymphocytes by natural and synthetic polynucleotide antigens, Cell Immunol, 147:148-157 (1993).	
		MOJCIK C et al., Administration of a phosphorothioate oligonucleotide antisense murine	
	*	endogenous retroviral MCF env causes immune effect in vivo in a sequence-specific manner, Clin	
		Immunol Immunopathol, 67(2):130-136 (1993).	
		MOTTRAM et al., A novel CDC2-related protein kinase from leishmania mexicana, LmmCRK1,	
	*	is post-translationally regulated during the life cycle, J Biol Chem, 268:28 21044-21052 (Oct.	
		1993).	
	*	NYCE J et al., DNA antisense therapy for asthma in an animal model, Nature, 385:721-5 (1997).	
	*	PISETSKY D, Stimulation of in vitro proliferation of murine lymphocytes by synthetic	
		oligodeoxynucleotides, Molecular Biology Reports, 18:217-221 (1993).	
	*	PISETSKY DS et al., Stimulation of murine lymphocyte proliferation by a phosphorothicate	
		oligonucleotide with antisense activity for herpes simplex virus. Life Science, 54:101-107 (1994).	
		PISETSKY DS, Immunological consequences of nucleic acid therapy, Antisense Res Dev, 5:219-	
	1	225 (1995).	
	*	PISETSKY DS, The immunological properties of DNA, J Immunol, 156:421-423 (1996).	
		QUDDUS J et al., Treating activated CD4+ T cells with either of two distinct DNA	1
	*	methyltransferase ihibitors, 5-azacytidine or procainamide, is sufficient to cause a lupus-like	
		disease in syngeneic mice. J Clin Invest 92(1):38-53, Jul. 1993.	
	*	RAZ E et al., Intradermal gene immunization: the possible role of DNA uptake in the induction of	
		cellular immunity to viruses, Proc Natl Acad Sci USA, 91:9519-9523 (1994).	
		ROJANASAKUL Y, Antisense oligonucleotide therapeutics: drug delivery and targeting, Advanced	
		Drug Delivery Reviews, 18:115-131 (1996).	
]	*	ROMAN M et al., Immunostimulatory DNA sequences function as T helper-1-promoting	
		adjuvants. Nat Med 3(8):849-854, Aug. 1997.	
	*	SATO et al., Immunostimulatory DNA sequences necessary for effective intradermal gene	
		immunization, <i>Science</i> , 273:352-354 (1996).	

FORM PTO-1449/A and B (Modified)	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
INFORMATION DISCLOSURE	FILING DATE: Herewith	
STATEMENT BY APPLICANT	APPLICANT: Krieg et al.	
Sheet 5 of 6	GROUP ART UNIT: unknown	EXAMINER: unknown

*	SCHNELL N et al., Identification and characterization of a Saccharomyces cerevisiae gene (PAR1) conferring resistance to iron chelators, Eur J Biochem, 200:487-493 (1991).	
*	SCHWARTZ DA et al., CpG motifs in bacterial DNA cause inflammation in the lower respiratory tract. J Clin Invest 100(1):68-73, Jul. 1, 1997.	
*	SHIRAKAWA T et al., The inverse association between tuberculin responses and atopic disorder. Science 275(5296):77-9, Jan. 3, 1997.	
*	SPARWASSER T et al., Macrophages sense pathogens via DNA motifs: induction of tumor necrosis factor-alpha-mediated shock. <i>Eur J Immunol</i> 27(7):1671-9, Jul. 1997.	
*	STEIN CA et al., Oligodeoxynucleotides as inhibitors of gene expression: a review, Cancer Res, 48:2659-2668 (1988).	
*	STULL RA et al., Antigene, ribozyme, and aptamer nucleic acid drugs: progress and prospects, <i>Pharm Res.</i> , 12(4):465-483 (1995).	
*	SUBRAMANIAN et al., Theoretical considerations on the 'spine of hydration' in the minor groove of d(CGCGAATTCGCG) d(CGGCTTAAGCGC): Monte Carlo computer simulation, <i>Proc Natl Acad Sci</i> USA, 85:1836-1840, Mar. 1988.	
*	TANAKA T et al., An antisense oligonucleotide complementary to a sequence in I gamma 2b increases gamma 2b germline transcripts stimulates B cell DNA synthesis and inhibits immunoglobulin secretion, <i>J Exp Med</i> , 175: 597-607 (1992).	
*	The New England Biolabs Catalog, 1988-1989, item #1230.	
*	TOKUNAGA T et al., A synthetic single-stranded DNA, poly (dG, dC), induces interferon-α/β and -γ, augments natural killer activity and suppresses tumor growth, <i>Jpn J Cancer Res</i> , 79:682-686, Jun. 1988.	
*	TOKUNAGA T et al., synthetic oligonucleotides with particular base sequences from the cDNA encoding proteins of Mycobacterium bovis BCG induce interferons and activate natural killer cells, <i>Microbiol Immunol</i> , 36(1):55-66 (1992).	
*	UHLMANN, et al., Antisense oligonucleotides: a new therapeutic principle, <i>Chem Rev</i> , 90:543-584 (1990).	
*	WAGNER RW, Gene inhibition using antisense oligodeoxynucleotides, <i>Nature</i> , 372:333-335 (1994).	
*	WALLACE et al., Oligonucleotide probes for the screening of recombinant DNA libraries, <i>Methods Enzymol</i> , 152:432-442 (1987).	
*	WEISS R, Upping the antisense ante: scientists bet on profits from reverse genetics, Science, 139:108-109 (1991).	
*	WHALEN RG, DNA vaccines for emerging infection diseases: what if?, <i>Emerg Infect Dis</i> , 2(3):168-175 (1996).	
*	WU GY et al., Receptor-mediated gene delivery and expression in vivo, <i>J Biol Chem</i> , 263:14621-14624 (1988).	
*	WU-PONG S, Oligonucleotides: opportunities for drug therapy and research, <i>Pharmaceutical Technology</i> , 18:102-114 (1994).	
*	YAMAMOTO S et al., DNA from bacteria, but not from vertebrates, induces interferons, activates natural killer cells, and inhibits tumor growth, <i>Microbiol Immunol</i> , 36(9):983-997 (1992).	
*	YAMAMOTO S et al., In vitro augmentation of natural killer cell activity and production of interferon-alpha/beta and -gamma with deoxyribonucleic acid fraction from Mycobacterium bovis BCG. <i>Jpn J Cancer Res</i> 79:866-73, Jul. 1988.	
*	YAMAMOTO S et al., Unique palindromic sequences in synthetic oligonucleotides are required to induce inf and augment INF-mediated natural killer activity, <i>J Immunol</i> , 148(12):4072-4076, Jun. 15, 1992.	
*	YAMAMOTO S, Mode of action of oligonucleotide fraction extracted from Mycobacterium bovis BCG, Kekkaku, 69(9):29-32 (1994).	

FORM PTO-1449/A and B (Modified)	APPLICATION NO.: unassigned	ATTY. DOCKET NO.: C01039.70075.US
INFORMATION DISCLOSURE	FILING DATE: Herewith	
STATEMENT BY APPLICANT Sheet 6 of 6	APPLICANT: Krieg et al.	
	GROUP ART UNIT: unknown	EXAMINER: unknown

*	YAMAMOTO T et al., Ability of oligonucleotides with certain palindromes to induce interferon production and augment natural killer cell activity is associated with their base length, <i>Antisense Res Dev</i> , 4:119-123 (1994).		
*	YAMAMOTO T et al., Lipofection of synthetic oligodeoxyribonucleotide having a palindromic sequence AACGTT to murine splenocytes enhances interferon production and natural killer activity, <i>Microbiol Immunol</i> , 38(10):831-836 (1994).		
*	YAMAMOTO T et al., Synthetic oligonucleotides with certain palindromes stimulate interferon production of human peripheral blood lymphocytes in vitro, <i>Jpn J Cancer Res</i> , 85:775-779 (1994).		
*	YI AK et al., IFN-γ promotes IL-6 and IgM secretion in response to CpG motifs in bacterial DNA and oligonucleotides, <i>J Immunol</i> , 156:558-564 (1996).		
*	YI AK et al., Rapid immune activation by CpG motifs in bacterial DNA, <i>J Immunol</i> , 157:5394-5402 (1996).		
*	ZHAO Q et al., Comparison of cellular binding and uptake of antisense phosphodiester, phosphorothioate, and mixed phosphorothioate and methylphosphonate oligonucleotides. <i>Antisense Res Dev</i> 3(1):53-66, Spring 1993.		
*	ZHAO Q et al., Stage-specific oligonucleotide uptake in murine bone marrow B-cell precursors. Blood 84(11):3660-6, Dec. 1, 1994.		

EXAMINER	DATE CONSIDERED

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[NOTE - Must provide a copy of any patent, publication, other information listed, even if it was previously submitted to, or cited by, the U.S. Patent Office in an earlier application, unless the earlier application is identified by the IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the copy was provided in the earlier application.]

^{*}a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No. 09/818,918, filed on March 27, 2001, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation-in-part, and divisional applications).